

In re Application of ANDREW
Serial No. 09/976,186

REMARKS

The Office action has been carefully considered. The Office action rejected claims 13 and 24 under U.S.C. § 101 as directed to non-statutory subject matter. Further, the Office action rejected claims 1-7 and 9-24 under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 6,714,220 B1 to Sigl et al. ("Sigl"). Further, the Office action also rejected claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Sigl in view of U.S. Patent Publication No.2002/0085038 to Cobbley et al. ("Cobbley"). Applicant respectfully disagrees.

By present amendment, claims 1, 11, and 14 have been amended for clarification and not in view of the prior art. Applicant submits that the claims as filed were patentable over the prior art of record, and that the amendments herein are for purposes of clarifying the claims and/or for expediting allowance of the claims and not for reasons related to patentability. Reconsideration is respectfully requested.

Applicant thanks the Examiner for the interview held (by telephone) on April 1, 2005. During the interview, the Examiner and applicant's attorney discussed the claims with respect to the prior art. The essence of applicant's position is incorporated in the remarks below.

Prior to discussing reasons why the applicant believes that the claims in this application are clearly allowable in view of the teachings of the cited and applied references, a brief description of the present invention is presented.

The present invention is directed to a method and system for automatically selecting a software input method and/or adjusting the keys displayed on a

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software input panel of a software input method based on the state of an application, e.g., a state corresponding to the currently focused field in which data is to be entered. The application may be independent from the software input method and its input panel, in that, for example, virtually any application can be used interchangeably with virtually any input method. Thus, various enabling applications and various input methods may interact without necessarily having knowledge of one another's features or capabilities. Furthermore, the keys need not be individual characters, but can represent strings of characters or other symbols, such as those most likely to be needed by a user when entering data. For example, when editing in a browser's address field, the user's most-recently accessed Internet and/or Intranet websites may appear on displayed keys for easy selection, along with strings such as "http://", "www.", and/or ".com" that are frequently needed.

In one implementation, an application, which may one of several coexisting independent applications, may communicate with a software input method manager to provide the software input method manager with information related to a desired input method. For example, the application may communicate state information corresponding to a field identifier, whereby the software input method manager can select an appropriate input method for that field. Note that this may occur when the field initially receives focus, or can be at some other time, such as when a user has entered a certain character or string. Further, the application may provide some of the displayed key choices to the software input method, such as via the software input method manager, so that the keys may reflect what the

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application wants displayed and/or what they represent, e.g., a favorites or most recently used list, with representative names to display for user selection.

Note that the above description is for example and informational purposes only, and should not be used to interpret the claims, which are discussed below.

Rejections under §101

The Office action rejected claims 13 and 24 as being directed to non-statutory subject matter. More specifically, the Office action contends that claims 13 and 24 are directed to a computer-readable medium and goes further to suggest that the specification recites a limitation on the term computer-readable medium as a modulated signal or carrier wave. Page 8, line 21 of the applicant's specification is cited. Applicant respectfully disagrees.

Section 2106(IV)(B)(1)(a) of the MPEP states that functional descriptive material that is recorded on some computer-readable medium is structurally and functionally interrelated to the medium and is statutory since use of technology permits the function of the descriptive material to be realized. See *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *In re Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim). Carrier waves and modulated signals are examples of data that may be interpreted by a computer (i.e., a computer-readable medium) and may also be considered a product-by-process which is also statutory *per se* if the underlying process is statutory. Furthermore, the MPEP specifically

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states (section 2106(IV)(B)(1)(c)) that a signal claim directed to a practical application is statutory regardless of its transitory nature. See *O'Reilly*, 56 U.S. at 114-19; *In re Breslow*, 616 F.2d 516, 519-21, 205 USPQ 221, 225-26 (CCPA 1980). Recent court decisions have also held that "signals" are proper statutory subject matter. See *Arrhythmia Research Technology, Inc. v. Corazonix Corp.*, 958 F.2d 1053, 22 USPQ.2d 1033 (CCPA 1992)(wherein the court held as incorrect the view that "signals" are improper statutory subject matter simply because there may be nothing necessarily physical about "signals" and held that computer-program related inventions can be claimed in terms of "signals" because computers operate according to signals. In fact, anything that is being manipulated or transformed can typically be drafted in terms of "signals").

For at least these reasons, applicant requests that the §101 rejection of claims 13 and 24 be withdrawn.

Rejections under §102(a)

Turning to the claims, amended claim 1 recites a system configured to provide user input to a plurality of application programs, comprising: a plurality of software input methods that are independent of each of the plurality of application programs, each software input method having an input panel configured to receive user input based on user interaction therewith, and a software input method manager independent of each of the plurality of application programs, the software input method manager configured to select one of the input methods based on a state of one of the application programs, to enable user interaction with the input panel of the input method to provide input to the application program.

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The Office action rejected claim 1 as being anticipated by Sigl. More specifically, the Office action contends that Sigl teaches a system to provide user input using a plurality of software input methods (subset panels) independent of the application program (numeric keypads are common to many applications), each with a panel configured to receive the user input based on user interaction (Figure 2, Ref. 3.2) therewith and a software input method manager independent of the application program (Column 2, lines 58-61 and column 6, lines 15 et seq.) configured to select one of the input methods based on the state of the applications program (field selected) to enable the user to interact with that input method to the application program (Figure 3, Ref. 3.5 and 3.6). Applicant respectfully disagrees.

Sigl teaches, generally, a single application within a computer system that is capable of providing multiple input keys for different parameters within the context of a control application. The actual appearance of the input fields on the screen depends on the nature and type of the parameters. See column 4, lines 60-63 of Sigl. However, the parameters of the application are only meaningful with respect to the virtual keys of the application, and the virtual keys of the application are only meaningful with respect to the parameters provided. See column 4, line 63 to column 5, line 5 of Sigl. Consequently, the system disclosed in Sigl is a closed system having a single application program that provides input fields and interprets input parameters all within the context of the single application.

Quite differently, the present invention is directed to a method and system capable of being applied across a plurality of application programs. More specifically, as recited in claim 1, the system comprises a plurality of software input

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methods that are independent of each of the plurality of application programs, each software input method having an input panel configured to receive user input based on user interaction therewith. In this manner, the application programs may be any possible application program that typically receives inputs from a user. The software input method manager, as well as the plurality of input methods, being independent of the application programs, may be used to provide input to any application program regardless of context, platform, or execution state.

Simply put, Sigl does not teach a software input method manager that is independent of the application program. Furthermore, Sigl does not teach a plurality of input methods also independent from any application program. Sigl teaches a single application program having integrated input methods that are determined by the context of the application program itself and not by any sort of software input method manager. Applicant submits, therefore, that claim 1 is allowable over the prior art of record for at least these reasons.

Applicant respectfully submits that dependent claims 2-7 and 9-10, by similar analysis, are also allowable. Each of these claims depends either directly or indirectly from claim 1 and consequently includes the recitations of independent claim 1. As discussed above, Sigl fails to disclose the recitations of claim 1 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 1 noted above, each of these dependent claims includes additional patentable elements.

For example, claim 3 recites the system of claim 1, further comprising, a component external to the application program that determines the state of the

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application and communicates the state to the software input method manager. Certainly, Sigl does not teach any components external to an application program that determine the state of the application program. Again, Sigl teaches a single application program that is capable of different input states as determined by the application program itself. For at least this additional reason, applicant submits that claim 3 is allowable over the prior art of record.

As another example, claim 10 recites the method of claim 1 further comprising, a database of previous user input information, wherein the software input method configures at least some keys on the input panel based on the previous user input information. Again, Sigl simply teaches a single application program capable of selecting its own input states. Certainly, Sigl cannot be construed to teach a database that allows a software input method (that is independent of the application program itself) to configure at least some keys on an input panel as recited in claim 10. Applicant submits that claim 10 is allowable for at least this additional reason over the prior art of record.

Turning to the next independent claim, amended claim 11 recites a computer-implemented method, comprising receiving application state data from an application program that is among a plurality of application programs, the application program state data received at a software input method manager, the software input method manager being independent of each of the plurality of application programs, selecting a selected input method from a plurality of software input methods, each software input method being independent of each of the plurality of application programs and having an input panel configured to receive

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user input based on user interaction therewith, and returning data to the application program corresponding to user interaction with the input panel, the input panel having at least one displayed key that when actuated returns a string of at least two characters to the application program.

The Office action rejected claim 11 as being anticipated by Sigl. The Office action cited sections and references to Sigl that were the same as those referenced in the rejection of claim 1 and recited a similar argument that was presented with respect to claim 1. Applicant respectfully disagrees.

As was discussed above with respect to claim 1, Sigl simply teaches a single application program capable of determining its own input state and appearance of an input panel based upon a determination of its own state. In fact, it appears that Sigl teaches a typical program structure. If the application program reaches a first state, then it provide a first input panel; if the application program reaches a second state, then it provide a second input panel; and so on. As a result, the different input states and input panels are meaningless outside the context of the application program and without the context of each other.

Again quite differently, claim 11 substantially recites receiving state data about an application program that is among a plurality of application programs, in which the state data received at a software input method manager is independent of each of the plurality of application programs, and, furthermore, selecting an input method that also is independent of each of the plurality of application programs. In this manner, the application program need not be concerned with the input method that has been chosen, but simply be concerned with the actual input (*i.e.*, the data).

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Sigl, on the other hand, does not teach receiving, from an application program that is among a plurality of application programs, application program state data at a software input method manager, the software input method manager independent of each of the plurality of application programs. Nor does Sigl teach selecting a selected input method from a plurality of software input methods, each software input method being independent of each of the plurality of application programs as recited in claim 11. Applicant submits that claim 11 is allowable over the prior art of record for at least these reasons.

Applicant respectfully submits that dependent claims 12 and 13, by similar analysis, are also allowable. Each of these claims depends directly from claim 11 and consequently includes the recitations of independent claim 11. As discussed above, Sigl fails to disclose the recitations of claim 11 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 11 noted above, each of these dependent claims includes additional patentable elements.

Turning to the next independent claim, amended claim 14 recites a computer-implemented method, comprising receiving application program state data from an application program that is among a plurality of application programs, the application program state received at a software input method manager that is independent of the application program corresponding to the application program state data, selecting an input panel based on the application program state data, the input panel independent of each of the plurality of application programs, displaying keys on the input panel to enable user interaction with the input panel,

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and returning key data to the application program corresponding to user interaction with the input panel.

The Office action rejected claim 14 as being anticipated by Sigl. The Office action again cited sections and references to Sigl that were the same as those referenced in the rejection of claim 1 and recited a similar argument that was presented with respect to claim 1. Applicant respectfully disagrees.

Again, as was discussed above with respect to claim 1, Sigl simply teaches a single application program capable of determining its own input state and appearance of an input panel based upon a determination of its own state. If the application program reaches a first state, then it provide a first input panel; if the application program reaches a second state, then it provide a second input panel; and so on. As such, the different input states and input panels are meaningless outside the context of the application program and without the context of each other.

Again quite differently, claim 14 recites receiving state data at a software input method manager that is independent of each of the plurality of application programs and selecting an input method that also is independent of each of the plurality of application programs. In this manner, each of the application programs need not be concerned with the input method that has been chosen, but simply be concerned with the actual input (*i.e.*, the data). Sigl, however, does not teach receiving application program state data at a software input method manager that is independent of each of the plurality of application programs corresponding to the application program state data, nor does Sigl teach selecting an input panel based

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on the application program state data, the input panel independent of each of the plurality of application programs as recited in claim 14. Applicant submits that claim 14 is allowable over the prior art of record for at least these reasons.

Applicant respectfully submits that dependent claims 15-24, by similar analysis, are also allowable. Each of these claims depends either directly or indirectly from claim 14 and consequently includes the recitations of independent claim 14. As discussed above, Sigl fails to disclose the recitations of claim 14 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 14 noted above, each of these dependent claims includes additional patentable elements.

Rejections under §103(a)

The Office action rejected claim 8 as being unpatentable over Sigl in view of Cobbley. Applicant respectfully disagrees.

To establish prima facie obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art; (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)), and "all words in a claim must be considered in judging the patentability of that claim against the prior art;" (*In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)).

Neither Sigl nor Cobbley disclose or suggest the limitations of claim 1. Claim 8 depends directly from claim 1 and consequently includes the recitations of independent claim 1. Applicant respectfully submits that dependent claim 8 is therefore allowable. In addition to the recitations of claim 1 noted above, claim 8 includes additional patentable elements.

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For at least the foregoing reasons, factual and legal, applicant submits that neither Sigl nor Cobbley, whether considered alone or in any permissible combination at law, meet these requirements, and thus that the present Office action has failed to establish prima facie obviousness as a matter of law. Reconsideration and withdrawal of the rejection of pending claim 8 based on Sigl and/or Cobbley is respectfully requested.

For at least these additional reasons, applicant submits that all the claims are patentable over the prior art of record. Reconsideration and withdrawal of the rejections in the Office action is respectfully requested and early allowance of this application is earnestly solicited.

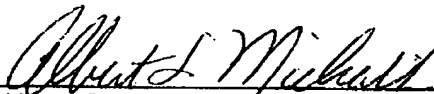
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CONCLUSION

In view of the foregoing remarks, it is respectfully submitted that claims 1-24 are patentable over the prior art of record, and that the application is in good and proper form for allowance. A favorable action on the part of the Examiner is earnestly solicited.

If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney at (425) 836-3030.

Respectfully submitted,



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